

R E M A R K S

Claims 3 and 5-12 are now in this Application, and are presented for the Examiner's consideration.

Request Acknowledgment of IDS

An Information Disclosure Statement with two references was filed as part of the Amendment filed on August 28, 2003, along with one Form PTO-1449. It is requested that the Examiner acknowledge that the IDS was entered, by returning a signed copy of the Form PTO-1449. For the Examiner's convenience, enclosed is a duplicate copy of the Form PTO-1449 previously submitted.

Prior Art Rejections

Claims 3, 5 and 6 were rejected under 35 U.S.C. §103(a) as being obvious from PCT Published Application No. WO 88/07448 to Sillars in view of U.S. Patent No. 5,081,926 to Rodi.

First Distinction

As stated in the previous filed Amendment, neither of these references teaches a method of printing wherein a length of a printed image is larger than a peripheral length of a largest of one of the printing cylinders. The present invention is useful only if this limitation applies.

The Examiner states that this limitation is in the preamble, and that the preamble is not given weight in a method claim. The

case law makes it clear that this depends on the particular claim, and it is submitted that this limitation is important to the present claim. However, to ensure that the limitation in the preamble is in the body of the claim, claims 3 and 5 have been amended to recite the step of "providing a printed image having a length which is larger than a peripheral length of a largest one of a plurality of printing cylinders of a rotary printing press," thereby moving this limitation to the preamble to the body of the claim so that it must clearly now be given weight. In addition, claims 3 and 5 have been amended, for clarification purposes, and consistent therewith, to recite, in the step of subdividing the printed image into elements, the language "such that each element has a length which is not larger than the peripheral length of the largest one of the printing cylinders," which is consistent with the aforementioned preamble language.

Sillars describes the printing of quasi-random tables for bingo or other games. The elements of the tables are printed by different printing cylinders, the printing cylinders printing intervening rows of elements (see page 3, second paragraph); or the columns are arranged alongside one another (see page 3, third paragraph). The size of such a table does nevertheless not extend beyond the printing length of the largest of the printing cylinders, as can also be seen from Figs. 2 to 5 and Fig. 7.

In Sillars, even though different rows and/or columns are printed, the length of the printed image is not larger than a

peripheral length of a largest one of the printing cylinders,

Rodi merely describes the use of movable applicator rollers for rapidly establishing an ink zone profile which usually occurs before the beginning of printing. This is useful to reduce waste but does not make a difference concerning the image or the size of the image that is to be printed.

The idea of printing an image with a length larger than a peripheral length of the largest one of the printing cylinders of a rotary printing press is not disclosed or even remotely suggested by Rodi.

If the Examiner is of a different opinion, the Examiner is requested to show specifically where in Sillars or Rodi there is any disclosure or suggestion for this aspect of the present claimed invention.

Therefore, even if these references are combined, the present invention, as now clearly defined by claims 3 and 5, would not be anticipated by or rendered obvious therefrom.

Further, no new issues are presented that would require a further search, since these limitations were earlier presented in the preamble of the same claims.

Second and Third Distinctions

The present invention provides for two different types of operations during printing, namely:

- a) There is the periodically shifting of one of the printing

cylinders off from the web, each time for at least a duration of one turn of the printing cylinder. This claimed step of periodically shifting includes the step of timing "on" and "off" adjustment movements of the printing cylinders such that each printing cylinder leaves those panels empty for which the elements are printed with another one of the printing cylinders. In this regard, as also claimed, there is the step of printing the panels with at least one element that is different from panel to panel, by means of a plurality of these printing cylinders.

b) In addition to the operation of a), there is the claimed step of printing an element that is identically repeated for each panel with a separate printing cylinder which remains constantly in an "on" position. Specifically, in the example of the present application, frame 50 is identically repeated for each panel N, and printing cylinder 18 prints frames 50.

Thus, some of the elements vary from panel to panel, and these are printed by the periodically shifting printing cylinders, while one element is identically repeated and is printed by a printing cylinder that stays on the entire time.

Sillars does not disclose or suggest either a) or b), which are both recited in claim 3, or a) alone which is recited in claim 5. The Examiner admits that Sillars does not disclose a shifting mechanism which shifts at least a duration of one turn of a printing cylinder and a step of "on" and "off" adjustment movements and a control unit.

As discussed above, Sillars describes the printing of quasi-random tables for bingo or other games, in which the elements of the tables are printed by different printing cylinders, the printing cylinders printing intervening rows of elements (see page 3, second paragraph), or the columns are arranged alongside one another (see page 3, third paragraph). Sillars has an object of producing a multitude of different tables, as is necessary for games like bingo.

In Sillars, the different cylinders are not periodically shifted off of the web.

Further, Sillars does not disclose or suggest the printed image having an element that is identically repeated for each panel, and the step of printing includes the step of printing this element with a separate printing cylinder which remains constantly in an "on" position. In Sillars, the frame and data are printed by the same roller.

Thus, neither a) nor b) is disclosed or suggested by Sillars, let alone the combination thereof.

As with Sillars, Rodi does not disclose or suggest a printing method according to prior claim 3, wherein the printed image has an element 50 that is identically repeated for each panel N, and the step of printing includes the step of printing this element with a separate printing cylinder 18 which remains constantly in an "on" position. This is aspect b) discussed above.

With Rodi, although there is a lifting mechanism 34a, 34b, the control system thereof is used to control normal aspects of operation of an offset printing press. Rodi specifically describes the use of movable applicator rollers for establishing an ink profile. No dedicated precise timing is needed for such operations. The mere fact that there is a generic arrangement of movable applicator rollers that are used in their normal operations, for example, to remove one applicator roller for cleaning or prior to a printing operation, is very different from periodically shifting one of the printing cylinders off from the web, each time for at least a duration of one turn of the printing cylinder, by timing "on" and "off" adjustment movements of the printing cylinders such that each printing cylinder leaves those panels empty for which the elements are printed with another one of the printing cylinders.

The present invention provides a shift mechanism that can make a very fast movement and which is adapted to high precision demands. The present invention allows that the image elements printed by different printing cylinders may be butted precisely and seamlessly, and essentially without overlap. Such precise high-speed movement would not have been possible with a control system as disclosed by Rodi.

In other words, in Rodi, the rollers are moved away at the start of an operation, but there is no disclosure or even a remote suggestion in Rodi of periodically shifting one of said printing cylinders off from the web, each time for at least a

duration of one turn of the printing cylinder, this step of periodically shifting including the step of timing "on" and "off" adjustment movements of the printing cylinders such that each printing cylinder leaves those panels empty for which the elements are printed with another one of the printing cylinders, as recited in claim 3, and recited in similar language in claim 5.

Therefore, Rodi also fails to disclose or suggest aspect b).

Thus, even if combined as suggested, the present claimed invention of claims 3 or 5 would not be provided or suggested.

Fourth Distinction

Claim 5 also recites the step of timing "on" adjustments of the single printing cylinder such that the element printed thereby is inserted into the printed image in a predetermined position and such that the element printed by the single printing cylinder overlaps at least two of the elements printed with different printing cylinders.

This has been disclosed in the present application for the special case that "the on and off periods of the printing cylinder D23 are time-shifted by one half period in comparison to the strokes of the other printing cylinders, so that the internal area 62 is printing in the center of the frame 60", referring to Figs. 3 and 4 in the penultimate paragraph on page 8 of the present application.

This aspect is nowhere disclosed or even remotely suggested by Sillars or Rodi.

Accordingly, it is respectfully submitted that the rejection of claims 3, 5 and 6 under 35 U.S.C. §103(a) has been overcome.

Claims 7-12 were rejected under 35 U.S.C. §103(a) as being obvious from Sillars in view of Rodi, and further in view of U.S. Patent No. 5,528,986 to Andersson et al.

The remarks made above in regard to Sillars and Rodi are incorporated herein. Andersson et al fails to cure the deficiencies of these references, as noted above.

Claim 7

In the first place, claim 7 has added the first distinction above, namely, the printing cylinders having a peripheral length such that a largest one of the printing cylinders has a peripheral length which is smaller than a printed image to be printed. As stated above, this is essential to the present invention. As discussed above, neither Sillars nor Rodi disclose or even remotely suggest this feature. Andersson et al was merely cited for disclosing a cylinder with an axle and a drive motor connected to an axle for maintaining a silent operation. However, Andersson et al is not even related to this aspect, and fails to cure the deficiencies of Sillars and Rodi as regards the same.

Claim 7 also recites the limitations of:

- a) the printing cylinders being individually slideably supported,
- b) the shift mechanism comprises a servomotor and a displacement sensor,
- c) the shift mechanism exerts large displacements during an operation of a cylinder exchange and smaller displacements during periodic shifting operations.

As to b), the Examiner appears to have erroneously identified the servomotor and the displacement sensor of the shift mechanism with the axle and drive motor of the printing cylinder. The drive motor 21 of Andersson et al is an ordinary drive motor that rotationally drives a printing cylinder. See column 5, lines 26-30 thereof. The motor 21' is an electric motor which drives the exit nip cylinders 17'. See column 5, lines 30-31.

However, there is no disclosure or even a remote suggestion in Andersson et al of a servo motor being part of a shift mechanism. Andersson et al also does not disclose or suggest a displacement sensor being part of a shift mechanism.

The mentioned features are designed such that the length of the time needed for shifting the printing cylinder between the engaged and the non-engaged position is substantially smaller than the rotation period of the printing cylinder. This language is the subject matter of claim 8. See page 3, lines 19 to 21 of the present application for support. This allows, even in the

case of high speed printing presses, the time needed for shifting to be negligible in comparison to the rotation period of the printing cylinder, so that the image elements printed by different printing cylinders may be butted precisely and seamlessly and essentially without overlap. See page 3, lines 32 to 35.

Claims 8-10

In regard to claim 8, the control system of Rodi is used to control normal aspects of operation of an offset printing press. Rodi specifically describes the use of movable applicator rollers for establishing an ink profile. No dedicated precise timing is needed for such operations.

The present invention, as recited in claim 8, provides a shift mechanism that can make a very fast movement and which is adapted to high precision demands. The present invention allows that the image elements printed by different printing cylinders may be butted precisely and seamlessly, and essentially without overlap. Such precise high-speed movement would not have been possible with a control system as disclosed by Rodi.

It is therefore submitted that the limitations of claim 8 are not disclosed or even remotely suggested by the combination of Sillars, Rodi and Andersson et al.

Accordingly, it is respectfully submitted that the rejection of claims 7-12 under 35 U.S.C. §103(a), has been overcome.

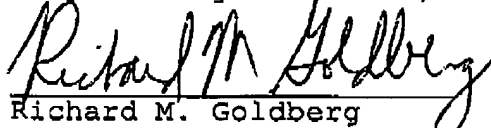
If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

In the event that this Paper is late filed, and the necessary petition for extension of time is not filed concurrently herewith, please consider this as a Petition for the requisite extension of time, and to the extent not tendered by check attached hereto, authorization to charge the extension fee, or any other fee required in connection with this Paper, to Account No. 07-1524.

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 07-1524.

In view of the foregoing amendments and remarks, it is respectfully submitted that Claims 3 and 5-12 are all allowable, and early and favorable consideration thereof is solicited.

Respectfully submitted,


Richard M. Goldberg
Attorney for Applicant
Registration No. 28,215

25 East Salem Street
Suite 419
Hackensack, New Jersey 07601
TEL (201) 343-7775
FAX (201) 488-3884
e-mail: goldbergpat@earthlink.net

enclosure: duplicate copy of previously submitted Form PTO-1449